CIA/BI GR 67-11
December 1966

Intelligence Report

SINKIANG
SUITABILITY FOR MISSILE IMPACT AREAS

DIRECTORATE OF INTELLIGENCE

S E C R E T
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Approved For Release 2000/06/26 : CIA-RDP84-00825R000100710001-7

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FOREWORD

This report and the accompanying map of Sinkiang (CIA 55380) are designed to aid in the identification of regions that would be suitable for missile impacting downrange from the Shuang-ch'eng-tzu Missile Test Center (SCTMTC) and of regions that may be eliminated from consideration because of economic activity or unsuitable terrain. The map was compiled from [redacted] translations of Chinese and Soviet scientific books and periodicals. Both the report and map were produced solely by CIA; they were prepared by the Office of Basic Intelligence.

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SINKIANG

SUITABILITY FOR MISSILE IMPACT AREAS

A surprisingly large proportion of Sinkiang appears for one reason or another to be unsuitable for use as a missile impact area. Large tracts are being reclaimed for agriculture; reserved for the exploitation of natural resources such as minerals, timber, and oil; or allocated for hydrological development. Inaccessibility or extremely difficult terrain rules out extensive uninhabited areas that might otherwise be suitable. Few regions have the characteristics considered desirable or necessary for use as impact areas.

I. Suitable Areas

One region with the physical characteristics that would permit possible use as an impact area lies southwest of the Lop Nor Nuclear Test Site, south of the Konche Darya (Kum Darya on map), and southeast of Tikenlik. This area, about 40 miles* square and about 600 miles from the SCTMTC, has the advantage of accessibility to existing facilities at the Lop Nor Test Site. Relatively good motorable roads are located to the north along the Konche Darya (Kum Darya on map), to the west along the old bed of the Tarim, and to the south across the southern Tarim Basin as far as Miran. Tikenlik, Charkhlik, and Miran all appear to be capable of supporting instrumentation sites. 25X1B 25X1B

25X1B [redacted] The chief drawbacks are the lack of accessibility to the east and the difficulty of movement across the area itself. To the east is the old lakebed of Lop Nor, a flat surface composed of dried salt sludge that is

* Statute miles are used throughout this report.

similar in appearance to frozen plowed ground. The northwestern section of the Lop Nor plain and small areas in the north and northwest have a rough eroded ridge topography referred to as yardang. Neither type of terrain could be traversed cross country by wheeled vehicles, and no tracks or trails are visible in the area. The sand dunes in this possible impact area, although shifting, are lower than those in the main portion of the Takla Makan Desert and could possibly be traversed by a tracked vehicle.

A second region that might be suitable for missile impacting lies in the central part of the Dzungarian Basin, which is about 200 miles east to west and 100 miles north to south. Use of any portion of this area would permit a maximum range length of about 750 miles from the SCTMTC. The area is characterized by north-south dune formations grouped in elongated ridges separated by shallow parallel depressions. The dunes are not shifting but instead are stabilized with a crust of small stones. There are no settlements and only a few little-used roads or trails in this area. Cross-country travel, especially north-south along the depressions, would be easier and less hazardous than in the Takla Makan Desert. The proximity of the area to the Sino-Mongolian border would constitute a security disadvantage.

Possible impact areas for a 500-mile range from the SCTMTC might be located in the territory that extends as far south of the Hami Basin and Turfan Depression as the Lop Nor plain and west almost to Baghrash Köl. Roads, trails, settlements, and other indication of human activity are completely lacking in all but the westernmost part of this area. Although the terrain is mountainous, elevations are lower and slopes are more gradual than in the western T'ien Shan and K'un-lun mountains. Some depressions between ridges are large enough to be considered for use as impact areas. There are a few sandy, semidune areas in these depressions, but most surfaces appear to be stable and stony. The principal drawback to current use of the region for missile impact purposes is its inaccessibility.

Possible impact areas in Sinkiang for ranges over 1,000 miles from the SCTMTC are limited to the western Tarim Basin. The central portion of the Tarim Basin -- the Takla Makan Desert -- is covered by shifting sand dunes. The only areas of relatively stabilized land are along the dry channel of the Khotan Darya and along a low mountainous ridge that intersects the riverbed about midway and extends westward to a point north of Merket in the valley of the Yarkand Darya. A tract of desert approximately 25 miles square to the southwest of the junction of the ridge and the riverbed is in the lee of prevailing winds and, although sandy, is free of dunes. There is no evidence, however, that this area is currently in use for missile impacting.

II. Probably Unsuitable Areas

The key to economic expansion in Sinkiang is water. Rainfall in most districts is minimal, and ground water is not always readily available. The most dependable source is meltwater in the streams and rivers that rise in the surrounding mountain ranges. Systems of water management that involve the elimination of terminal lakes, soil washing, and the construction of dams, retention basins, stone-lined irrigation canals, and ditches have been instituted along the courses of the major rivers. In this study it is assumed that regions with water resources capable of supporting economic development are unlikely to be used as impact areas.

Agriculture in Sinkiang is concentrated along the rims of the Dzungarian and Tarim Basins and has expanded significantly in recent years. In the Dzungarian Basin recent agricultural development is most evident in the Manas River valley, along the Urumchi River, and in the area between the Kara Irtysh and Urungu River east of Pu-lun-t'o Hai. In the Tarim Basin the most striking transformation has been in the Konche Darya and Tarim valleys east of Korla; extensive work has also taken place in the vicinity of A-k'o-su and in the Yarkand and Kashgar districts in the far west.

Most of the T'ien Shan from the Sino-Soviet border east as far as Baghrash Köl and the Turfan Depression shows signs of economic activity. The northern slopes of the T'ien Shan are crisscrossed by a network of roads that serve lumbering and mining activities. Some of the mines supply iron ore to the new steel plant in Urumchi; coal is mined in the foothills northeast and southwest of the city. Stands of spruce that grow in the valleys and on the north-facing slopes of the T'ien Shan provide timber, a scarce commodity in Sinkiang as well as elsewhere in China. The only other area in Sinkiang with usable timber is located in the Altai Mountains near the Sino-Mongolian border. The Ili River valley is one of the more naturally productive areas of Sinkiang and contains few wastelands. Streams that drain south from the T'ien Shan toward the Tarim River are slated for damming and other control measures to make more water available for the reclamation of the middle Tarim river basin.

Areas indicated on the accompanying map as under economic development to the west and north of the Dzungarian Basin include several small cultivated valleys that open out toward the Sino-Soviet border, the Karamai oilfields, and the areas of timber resources and mining -- mostly of rare metals -- of the Altai Mountains. The region north of the Urungu probably would be particularly unsuitable as an impact area because a missile following a great-circle course to it from the SCTMTC would pass over Mongolian territory.

Also considered unlikely as missile impact areas, even though mostly uninhabited, are the western T'ien Shan and the K'un-lun mountains. The plan to control use of their streams for irrigation in the Tarim Basin argues against the use of the area for missile impacting. Furthermore, both mountain ranges rise very steeply from the basin floor and are extremely rugged and difficult of access. Elevations north of A-k'o-su, for example, rise about 20,000 feet within an air distance of 30 miles -- an extreme example but one indicative of the difficulties that would be encountered in this area.

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CIA/BI GR 67-11, December 1966, Sinkiang: Suitability for Missile Impact Areas

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Other Instructions and Comments: Hopefully, [redacted] The accompanying map is available in GD/F.

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	No pim yet- One sending a requirement	
~~5 Oct 66~~	PIM	STATINTL
	Both [redacted] logged time in September.	
14 Oct.	In work.	
24 "	Research in progress	
28 Oct.	In research - terms being expanded to include larger area (Dzungarian basin	
	as well as the Tarim Basin)	
4 Nov	In work	
14 Nov.	Text in writing - map about ready to go to CD	
18 Nov.	on 21 Nov	
28 Nov.	Manuscript map now ready for CD; text in writing. Issuance date will depend on time required in CD - Dec.	
2 Dec	Map in CD; text nearing completion	
12 Dec.	Draft will go [illegible] in 12 Dec; Map completed.	[illegible]
14 Dec	Completed; Dissem 19 (Monday)	
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61.230B	Sinkiang Missile Site	ONE [redacted] [redacted]

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X PROJECT PROPOSAL		RESEARCH ACTIVITY NOTICE

SUBJECT

Sinkiang Missile Range

PROJECT NUMBER

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SUBJECT CODE

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REQUESTING OFFICE

[illegible]

STATEMENT OF PROBLEM

25X1A 25X1A

TARGET DATE

30 Nov. 19[illegible]

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80

To compile a study which will indicate locations that would be suitable for use as down-range impact areas for a missile range in Sinkiang. These areas will be identified through elimination by plotting areas deemed inappropriate as impact areas for reason of unsuitable terrain, the presence of human habitation, or agricultural development.

COORDINATION REQUIRED FROM

CD/BI : Preparation of necessary maps.
OTHER CIA: NPIC, OCR/Graphics and Special Register.
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